

Wayne Jefferson Shotts

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Born on March 20, 1945 in Des Plaines, Illinois, Wayne J. Shotts received his B.A. in Physics from the University of California at Santa Barbara in 1967 and his Ph.D. in experimental solid-state physics from Cornell University in 1973. In October 1973, Dr. Shotts began his professional career as a research physicist with E. I. duPont de Nemours & Company. In June 1974, he joined Lawrence Livermore National Laboratory (LLNL), where today he is both the Associate Director for Nonproliferation, Arms Control, and International Security and the Acting Director of the Homeland Security Organization.

Dr. Shotts' research interests have included far-infrared studies of solids, low-temperature experimental techniques, applied optics, nuclear design of strategic and tactical systems, nuclear chemical analysis of nuclear performance, x-ray transport and opacity of materials, electromagnetics and plasma physics, and arms control and nuclear policy. He has participated in numerous studies on such topics as the future of the U.S. nuclear infrastructure, nuclear stockpile, and nuclear weapons laboratories and of the threat posed by terrorist use of weapons of mass destruction against the U.S.

From his initial role as an individual researcher, Dr. Shotts became leader of a nuclear design group responsible for developing low-fission weapons and advanced weapons concepts. In September 1985, he was appointed division leader of the Nuclear Chemistry Division, which performed radiochemical yield determination on all LLNL nuclear tests.

In October 1988, Dr. Shotts was appointed Principal Deputy Associate Director for Military Applications, an organization responsible for weapons planning and development. In that capacity, he initiated an effort to pursue component reuse as a method of producing safer weapons by reusing components from retired warheads. He also led studies on the strategic role of the national security laboratories in the future configuration of the U.S. nuclear weapons complex. In October 1992, Dr. Shotts was appointed Principal Deputy Associate Director for Defense Systems/Nuclear Design (renamed Defense and Nuclear Technologies in October 1994), where he shared responsibility for the overall functioning of the Laboratory's Nuclear Weapons Program.

Dr. Shotts assumed the position of Associate Director for Nonproliferation, Arms Control, and International Security (NAI) in November 1995. As Associate Director for NAI, Dr. Shotts leads major programs in proliferation prevention and arms control, proliferation detection and defense systems, counterterrorism and incident response, and international assessments.

In December 2002, Dr. Shotts was named acting Director of the newly formed Homeland Security Organization. In this capacity, Dr. Shotts oversees programs aimed at supporting the new Department of Homeland Security and providing comprehensive solutions, integrating threat, vulnerability and tradeoff analyses, advanced technologies, field-demonstrated prototypes, and operational capabilities, to assist federal, state, local, and private entities in defending against catastrophic terrorism.

In October 1990, Dr. Shotts was awarded the E. O. Lawrence Award for National Security. He was honored for his contributions to the research and development of advanced nuclear weapons, and his innovative approach to improving diagnostic methods which have aided in solving some of the most pressing problems in nuclear explosive designs. Dr. Shotts is a long-time member of the American Association for the Advancement of Science and the American Physical Society (APS). In December 2002, he was elected as a member of the APS Panel on Public Affairs.